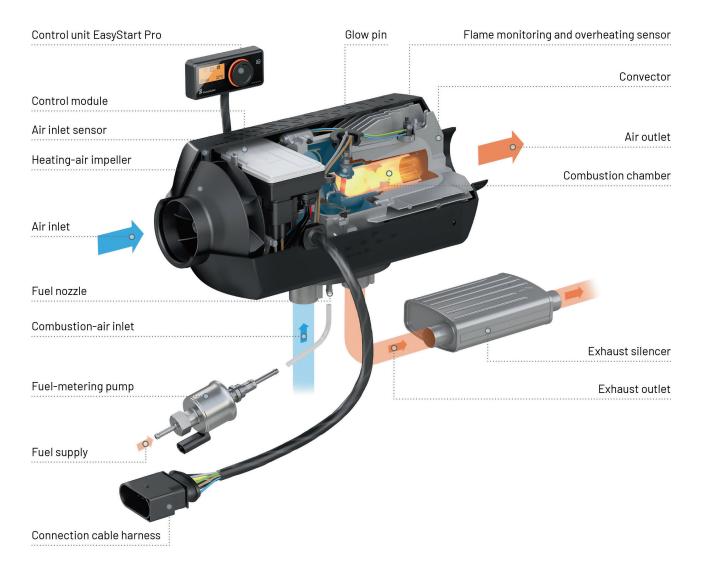
## AIRTRONIC: TECHNOLOGY



### AIRTRONIC FUNCTIONS:

- Combustion air is conveyed to the combustion chamber by the fan motor and impeller.
- Fuel is drawn from the vehicle's tank.
- Fuel is delivered to the combustion chamber by the metering pump.
- The glow element (filament glow plug from 5 kW) vaporizes this fuel as it enters the combustion chamber and creates a combustible fuel-air mix with the combustion air.
- The resulting flame formation switches off the glow element (or filament glow plug), transfers the heat to the heating air via the convector, and diverts exhaust gas via the exhaust silencer.
- The fan motor and heating-air impeller convey cool air to the heater, where it is warmed by the convector and then blown into the vehicle interior.

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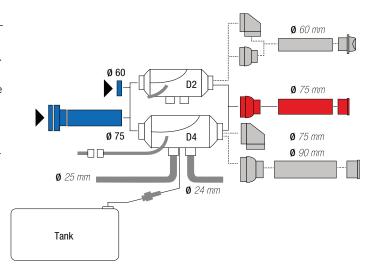
The heating output information provided refers to heating the interior of a cold vehicle to around 68 °F or 20 °C in cold outside temperatures. If the heater only needs to maintain the existing temperature of the interior, less heating power is required. The heating outputs are only guide values. The exact heating requirement also depends on other environmental conditions (e.g. wind, materials, cabin walls, heating-air ducting, etc.).

| GUIDE VALUES FOR REQUIRED HEATING OUTPUT |                        | Outside temperature |                |        |  |
|--|------------------------|---------------------|----------------|--------|--|
| Example Volume of interior               |                        | < -15 °C            | -15 °C to 0 °C | > 0 °C |  |
| Truck cabin                              | < 8 m <sup>3</sup>     | 4 kW                | 3 kW (2 kW)*   | 2 kW   |  |
| Small bus                                | 8 – 12 m <sup>3</sup>  | 5 kW (4 kW)*        | 4 kW (3 kW)*   | 2 kW   |  |
| Motor home / van                         | 12 – 20 m <sup>3</sup> | 8 kW                | 6 kW (5 kW)*   | 4 kW   |  |

<sup>\*</sup> Values (referring to heat-insulated cabins / vehicles)

#### Selecting the device and the respective advantages:

- Airtronic S3 Commercial: the smallest air heater on the market, advantageous in cramped installation spaces. Air ducting with 60 mm or 75 mm air hoses possible. Performance 2,200 Watt (Gasoline 2,000 Watt).
- Airtronic M3 Commercial: output 4,000 W, air ducting with 75 mm or 90 mm air hoses possible, for vans and suitably sized trucks; offers the advantage of high power within a reasonable installation space, wide range of applications from 1,050 W (gasoline 1,300 W) to 4,000 W.
- Airtronic M3 Recreational: for applications requiring a higher air throughput, e.g. for long, complex heating-air ducting in campers/motor homes, boats or ambulances. Performance 4,000 Watt



### EBERSPÄCHER AIRTRONIC





|   |                                    | Airtronic S3 Commercial  |                        |  |
|---|------------------------------------|--|------------------------|--|
|   |                                    | Heater, metering pump  |                        |  |
|   | Airtronic S3 D2L - 12V             | Airtronic S3 D2L - 24V   | Airtronic S3 B2L - 12V |  |
|   | 25.2953.05.0000                    | 25.2954.05.0000  | 20.2029.05.0000        |  |
| ) Diesel  | Diesel                             | Gasoline   |                        |  |
| V   | 12                                 | 24   | 12                     |  |
|   |                                    | Air  |                        |  |
|   | Off / minimum / maximum - Stepless |  |                        |  |
| W   | 850 - 2,200                        |  | 1,000 - 2,000          |  |
| BTU/hr  | 2900 - 7510                        |  | 3400 - 6820            |  |
| l/h   | -/0.1/0.27                         |  | - / 0.14 / 0.26        |  |
| gal/hr  | - / 0.03 / 0.07                    |  | - / 0.04 / 0.07        |  |
| W   | 4 / 6 / 27                         | 7/9/28   | 4 / 11 / 26            |  |
| W   | ≤80                                | ≤ 90   | ≤ 80                   |  |
| kg/h  | 20/50/105                          |  | 20/65/100              |  |
| V   | 10.5                               | 21   | 10.5                   |  |
| V   | 16                                 | 32   | 16                     |  |
| Interference suppression Interference suppression class 5 (DIN EN 5 |                                    | nterference suppression class 5 (DIN EN 55025)   |                        |  |
| mm  | 310 x 115 x 122                    |  |                        |  |
| Weight Kg or (lbs)  |                                    | Арргох. 2.5  |                        |  |
|   |                                    | Available  |                        |  |
|   | W BTU/hr I/h gal/hr W kg/h V v mmm | 25.2953.05.0000  Diesel  V  12  Off / min  W  850 - 2,200  BTU/hr  2900 - 7510  I/h  -/ 0.1 / 0.27  gal/hr  W  4 / 6 / 27  W  ≤ 80  kg/h  V  10.5  V  16 | Heater, metering pump  |  |

## EBERSPÄCHER AIRTRONIC





|   |        |   |                     | 11                  |  |
|---|--------|---|---------------------|---------------------|--|
| Heater                                  |        | Airtronic M3 Commercial                         |                     |                     |  |
| Product Package                         |        |   |                     |                     |  |
| Techn. designation                      |        | Airtronic D4L - 12V                             | Airtronic D4L - 24V | Airtronic B4L - 12V |  |
| Order no. for heater                    |        | 25.2955.05.0000                                 | 25.2956.05.0000     | 20.2030.05.0000     |  |
| Fuel - commercially available (DIN EN 5 | 90)    | Diesel  |                     | Gasoline            |  |
| Voltage                                 | V      | 12  | 24                  | 12                  |  |
| Heating medium                          |        | Air   |                     |                     |  |
| Control/heat settings                   |        | Off/stepless: minmax.                           |                     |                     |  |
| Heating Perfomance                      | W      | -/ 1,050 / 4,000                                |                     | -/ 1,300 / 4,000    |  |
| Heating Perfomance                      | BTU/hr | - / 3583 / 13649                                |                     | - / 4436 / 13649    |  |
| Fuel consumption                        | l/h    | - / 0.12 / 0.49                                 |                     | -/ 0.17 / 0.55      |  |
| Fuel consumption                        | gal/hr | - / 0.03 / 0.12                                 |                     | - / 0.04 / 0.15     |  |
| Elec. power consumption, operation      | W      | 4 / 6 / 37                                      | 7 / 9 / 39          | 4 / 8 / 38          |  |
| Elec. power consumption, start          | W      | ≤ 105   | ≤100                | ≤ 105               |  |
| Air throughput w/o backpressure         | kg/h   | 35 / 40 / 185                                   |                     | 24 / 85 / 180       |  |
| Lower voltage limit                     | V      | Approx. 10.5                                    | Approx. 21          | Approx. 10.5        |  |
| Upper voltage limit                     | V      | Approx. 16                                      | Approx. 32          | Approx. 16          |  |
| Interference suppression                |        | Interference suppression class 5 (DIN EN 55025) |                     |                     |  |
| Dimensions L x W x H                    | mm     | 376 x 140 x 150                                 |                     |                     |  |
| Weight empty                            | Kg     | 4.5   |                     |                     |  |
| Ventilation mode                        |        |   | Available           |                     |  |
|   |        |   |                     |                     |  |

## EBERSPÄCHER AIRTRONIC



| Heater                                |        | Airtronic M3 Recreational                       |                     |                     |  |
|---------------------------------------|--------|---|---------------------|---------------------|--|
| Product Package                       |        |   |                     |                     |  |
| Techn. designation                    |        | Airtronic D4R - 12V                             | Airtronic D4R - 24V | Airtronic B4R - 12V |  |
| Order no. for heater                  |        | 25.2957.05.0000                                 | 25.2958.05.0000     | 20.2031.05.0000     |  |
| Fuel commercially available(DIN EN 59 | 0)     | Diesel  |                     | Gasoline            |  |
| Voltage                               | V      | 12  | 24                  | 12                  |  |
| Heating medium                        |        | Air   |                     |                     |  |
| Control/heat settings                 |        |   |                     |                     |  |
| Heating Perfomance                    | W      | -/ 1,050 / 4,000                                |                     | -/ 1,300 / 4,000    |  |
| Heating Performance                   | BTU/hr | - / 3583 / 13649                                |                     | - / 4436 / 13649    |  |
| Fuel consumption                      | l/h    | -/ 0.12 / 0.49                                  |                     | -/ 0.17 / 0.55      |  |
| Fuel consumption                      | gal/hr | -/0.03/0.12                                     |                     | - / 0.04 / 0.15     |  |
| Elec. power consumption, operation    | W      | 5 / 7 / 53                                      | 8 / 10 / 55         | 5 / 10 / 54         |  |
| Elec. power consumption, start        | W      | ≤ 105   | ≤90                 | ≤ 110               |  |
| Air throughput w/o backpressure       | kg/h   | 37 / 45 / 190                                   |                     | 37 / 85 / 190       |  |
| Lower voltage limit                   | V      | Approx. 10.5                                    | Approx. 21          | Approx. 10.5        |  |
| Upper voltage limit                   | V      | Approx. 16                                      | Approx. 32          | Approx. 16          |  |
| Interference suppression              |        | Interference suppression class 5 (DIN EN 55025) |                     |                     |  |
| Dimensions L x W x H                  | mm     | 376 x 140 x 150                                 |                     |                     |  |
| Weight empty                          | Kg     | Approx. 2.5                                     |                     |                     |  |
| Ventilation mode                      |        | Available                                       |                     |                     |  |

## EBERSPÄCHER AIRTRONIC



Airtronic L3



Airtornic XL3

Heater

3 4

| Product Package                         |        |   | Heater, metering pump  |                         |
|---|--------|---|------------------------|-------------------------|
| Techn. designation                      |        | Airtronic L3 D6L - 12V                          | Airtronic L3 D6L - 24V | Airtronic XL3 D8L - 24V |
| Order no. for heater                    |        | 25.2959.05.0000                                 | 25.2960.05.0000        | 25.3020.05.0000         |
| Fuel - commercially available(DIN EN 59 | 10)    |   | Diesel                 |                         |
| Voltage                                 | V      | 12 24   |                        |                         |
| Heating medium                          |        | Air   |                        |                         |
| Control/heat settings                   |        | Off/stepless: minmax.                           |                        |                         |
| Heating Perfomance                      | W      | -/ 1,500 / 6,000                                |                        | -/ 2,000 / 7,600        |
| Heating Performance                     | BTU/hr | - / 5118 / 20473                                |                        | - / 6824 / 25932        |
| Fuel consumption                        | l/h    | -/ 0.16 / 0.74                                  |                        | -/ 0.23 / 1.01          |
| Fuel comsumption                        | gal/hr | -/0.04/0.20                                     |                        | - / 0.06 / 0.27         |
| Elec. power consumption, operation      | W      | 7 / 90  | 11 / 95                | 8 / 130                 |
| Elec. power consumption, start          | W      | ≤ 90  | ≤ 85                   | ≤90                     |
| Air throughput w/o backpressure         | kg/h   | 60 / 80 / 285                                   |                        | 60 / 120 / 300          |
| Lower voltage limit                     | V      | Approx. 10.5                                    |                        | Approx. 21.4            |
| Upper voltage limit                     | V      | Approx. 16 App                                  |                        | Approx. 32              |
| Interference suppression                |        | Interference suppression class 5 (DIN EN 55025) |                        |                         |
| Dimensions L x W x H                    | mm     | 438 x 160 x 17                                  | 0                      | 493 x 160 x 170         |
| Weight empty                            | Kg     |   | Approx. 7              | Approx 8.5              |
| Ventilation mode                        |        |   | Available              |                         |

#### Items in the Kit

#### HARDWARE KIT INCLUDES:

Mounting Screws Nuts **Ducting Clamps** Flanges Screens Washers Grommets

Routing Clamps **Exhaust Clamps End Caps Exhaust Brackets** 



**FUEL SYSTEM INCLUDES:** 

Clamps 5 mm Fuel Line Plastic Fuel Line 3.5 mm Fuel Line

Refer to the Accessories Section for ducting components and additional accessories. Refer to heater manual for individual installation parts.

## HARDWARE KIT INCLUDES:

Cable Ties

Fuel Clamps **Exhaust Clamps** Nuts Mounting Screws

**Ducting Clamps End Caps** 

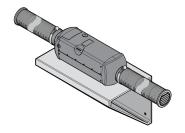
Washers **Routing Clamps**  **Exhaust Brackets** 

**FUEL SYSTEM INCLUDES:** Clamps 5 mm Fuel Line Plastic Fuel Line 3.5 mm Fuel Line

Refer to the Accessories Section for ducting components and additional accessories. Refer to heater manual for individual installation parts.

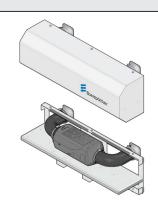
Fuel System
Ducting
Mounting Bracket
Control Options / Timers
Fuel Pick-up Pipe
Hardware Kit
Exhaust Pipe
Intake Pipe
Boxed Enclosure

#### ECHO / CARGO KITS



#### Cargo install kits

ECHO AXL3 D8L ASSEMBLY 12V DC/110 V AC
ECHO AL3 D6L HEATER ASSEMBLY 12V ++
INSTALL KIT - ECHO AX3 4/6 12V - NO HTR ++
INSTALL KIT - CARGO AX3 4/6 WALL- NO HTR ++



#### ECHO series install kits

20.2830.20.0801 20.2829.59.0461 20.2829.59.0462 \*\* 20.2829.59.0463 \*



- \*\* PN 20.2829.59.0462 does not come with the heater and outlet hood. Select from following list of heater and its outlet hood (90 mm) combinations:
- 1. 20.2829.59.0462 with AL3 D6L Heater
  - 12V AL3 D6L Heater: 25.2959.05.0000
  - Duct hood (90 mm) for D6L: 22.1000.01.0086
- 2. 20.2829.59.0462 with AM3 D4R Heater
  - 12V AM3 D4R Heater: 25.2957.05.0000
  - Duct hood (90 mm) for D4R: 22.1000.01.0019
- 3. 20.2829.59.0462 with AM3 B4R Heater
  - 12V AM3 B4R Heater: 25.2031.05.0000
  - Duct hood (90 mm) for D4R: 22.1000.01.0019

- \* PN 20.2829.59.0463 does not come with the heater and outlet hood. Select from following list of heater and its outlet hood (90 mm) combinations:
- 1. 20.2829.59.0463 with AL3 D6L Heater
  - 12V AL3 D6L Heater: 25.2959.05.0000

Harness

- Duct hood (90 mm) for D6L: 22.1000.01.0086
- 2. 20.2829.59.0463 with AM3 D4R Heater
  - 12V AM3 D4R Heater: 25.2957.05.0000
  - Duct hood (90 mm) for D4R: 22.1000.01.0019
- 3. 20.2829.59.0463 with AM3 B4R Heater
  - 12V AM3 B4R Heater: 25.2031.05.0000
  - Duct hood (90 mm) for D4R: 22.1000.01.0019
- ++ Enhance 12V CARGO/ECHO 6 with shore power input option: (PNs: 20.2829.59.0461, 20.2829.59.0462, 20.2829.59.0463)
  - 1) Shore power plug in (110V AC)
    - 110V AC- 12V DC Power converter assembly: 20.2900.70.0172
    - Power receptacle box assembly; 20.2900.40.8005

For further information related to power converter and its electrical connections, please contact Eberspaecher Technical Support

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3

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## OUICK-REFERENCE GUIDE

The basic principle of pre-heaters is to heat the passenger compartment of all kinds of vehicles without having to depend on the heat given off by a running engine. That's a well-known fact. But at some point or other you must have asked yourself what the actual difference is between air and water heaters.

## Air-based pre-heater – Eberspächer Airtronic:

Air-based pre-heaters are mostly installed inside the cab and directly heat the air inside it, which is sucked in via the unit's own fan. Their effects are noticeable almost instantly, as the heat in the form of hot gas, which is produced by a burner, does not have to heat up a water circuit first. Modern devices are very quiet, low on emissions and chiefly used to maintain the temperature in the cab of a truck or van at a pleasant level even while it is at a standstill (e.g. overnight).

#### Water-based pre-heater - Eberspächer Hydronic:

Water-based pre-heaters have a compact design and can be fitted almost anywhere in the engine compartment. They are therefore the pre-heater of choice for cars with interiors too cramped for additional installations. The heat generated by a burner is transferred to the vehicle's coolant.

An (additional) electric circulation pump distributes the hot coolant, even when the engine is switched off. Then, the interior fan is activated automatically - everything works as it does in normal heater operation. Water-based heaters therefore not only warm up the interior but, depending on the application, also the engine or the water used in boats or motor homes. Engines heated in this way can be started more easily in cold weather while also protecting the car battery from the effects of the cold, and producing fewer harmful emissions on starting, as the hotter exhaust temperature enables the catalytic converter to reach its operating temperature more quickly. The cold-starting phase, which produces mechanical stress and higher emissions, is dramatically reduced, as the oil reaches operating temperature fast when the engine is started. This saves fuel and money while lowering CO2 emissions at the same time.

Both systems generally run on the vehicle's fuel, straight out of the fuel tank. Depending on the model, you can use a timer, remote control, smartphone, smartwatch, Alexa or a browser to control them.

## QUICK REFERENCE GUIDE

#### Airtronic S3 (2.2 kW):

Heating comfort for a variety of applications.



Vans, small motor homes, small buses



Truck cabs with sleeping cabins



Construction and agricultural machines without engine-dependent heating



Forklifts and other plant machinery



Electric vehicles

#### Airtronic M3 (4 kW):

The high-performance, compact air heater for mid-range requirements.



Large trucks - cabs with sleeping cabins



Vans, small buses



Large agricultural and construction machines



Motor homes



Minivans, and vehicles used for conferences and consultancy

## Airtronic L3 (6 kW):



Vans, workshop vehicles, personnel carriers, small buses (fast heating despite door opening frequently)



Ambulances and emergency medics' vehicles (special heating and temperature requirements)



Freight compartment and freight goods heating plus frost protection and dew point prevention

#### Airtronic XL3 (8 kW):

Continuously variable, pre-selectable heating performance regulation.



Large freight compartments, containers



Personnel carriers



Coaches and city buses